

REMARKS

The Office Action of July 5, 2006, has been carefully considered.

The specification has been amended to insert a reference to the prior PCT application, a proper subject matter headings.

Applicants submit herewith a copy of DE 3803293, listed on the Information Disclosure Statement.

Objection has been raised to Claims 1, 3 and 6. It is noted that the claims have now been entirely rewritten, with original Claims 1 through 12 now Claims 13 through 24. In new Claim 13 is it noted that the gap is delimited by the surface of the pole piece and the means for creating the magnetic flux. This corresponds to the gap 8 as shown in Figure 1. Moreover, new Claim 25 defines the gap as being fixed in distance along the length of travel of the object, also as shown in Figure 1.

Regarding the definition of the measuring cell as measuring the magnetic flux minus the leakage flux, it is noted that in a closed magnetic circuit, all magnetic flux lines follow the magnetic circuit and are concentrated in the gap in which a measuring structure is located. To the contrary, in an open magnetic circuit according to the invention, magnetic field lines are not channeled in the magnetic circuit and the cell 11 measures the magnetic flux delivered by magnet 4 *minus* a magnetic leakage flux which occurs because the cell is not disposed in the measuring gap.

Regarding Claim 15, the means for creating the magnetic flux being displaceable in translation relates specifically to the displacement shown in Figure 1.

Claim 8 has been rejected under 35 USC 112, second paragraph, as being indefinite in the recitation of the

location of the four magnets. Claim 8 has been replaced by new Claim 20 in which the means for creating the magnetic flux comprises a series of four magnets having magnetization directions which are shifted by 90°. This is the embodiment shown in Figure 4 of the application, in which four magnets are shown, in which the magnetization directions, represented by the arrows, are each shifted by 90° with respect to the next magnet. As the language of Claim 20 closely follows the showing of Figure 4, withdrawal of this rejection is requested.

Claims 1, 2, 3, 9 and 12 have been rejected under 35 USC 102(b) as anticipated by Juds et al.

The Office action alleges that Juds et al discloses an open magnetic circuit delimiting at least one gap and including means for creating a magnetic flux mounted and displaceable by the moving object delimiting the at least one gap. Juds et al, however, does not disclose an open magnetic circuit, but rather a *closed* magnetic circuit. Note the statement at column 3, lines 53-58, that "[b]ecause flux plates 50 and 55 are formed of a material in high magnetic permeability, substantially all of the flux lines touching flux plates 50 and 55 follow these flux plates and consequently appear across narrow gap 53. Magneto resistive structure 70 is disposed in narrow gap 53 to detect the magnitude of magnetic flux." While Juds et al does disclose the linear position of element 40, there is no magnetic leakage flux because the flux is entirely measured by element 70 in the gap between elements 50 and 55.

Moreover, according to new Claim 25, the gap distance is constant, whereas according to Juds et al the distance between element 40 and the pole pieces constantly varies.

Thus, Juds et al discloses a closed magnetic circuit

which is different from the open magnetic circuit defined by the present claims, and withdrawal of this rejection is requested.

Claim 4 has been rejected under 35 USC 103(a) over Juds et al in view of Porcher et al.

Porcher et al has been cited to show means for calculating the difference between the output signals delivered by first and second measuring cells. Porcher et al does not, however, cure the defects of the Juds et al reference, and withdrawal of this rejection is requested.

The allowability of Claims 5, 6, 10 and 11 has been noted.

In view of the foregoing amendments and remarks, Applicants submit that the present application is now in condition for allowance. An early allowance of the application with amended claims is earnestly solicited.

Respectfully submitted,


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